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A SURVEY OF THE MOLLUSCS OF CRIB POINT, WESTERN PORT, VICTORIA[1]

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SUMMARY

A survey of the benthos of the Crib Point area of Western Port conducted in 1965 has yielded quantitative data on the abundance and distribution of molluscs in that region. Sixteen species of Amphineura, sixty-six species of Gastropoda and thirty-nine species of Bivalvia were collected. Twelve of these one hundred and twenty-one species provided sixty per cent of the three thousand eight hundred individuals recorded. *Micromytilus francisensis* Cotton, 1931 was recorded from Victoria for the first time.

INTRODUCTION

Although Macpherson and Gabriel (1962) have provided a comprehensive list of the marine mollusc species found in Victoria there have, with the exception of studies in Port Phillip (Black 1971; King *et al* 1971; Poore and Rainer 1974), been few ecological studies of the group. The geographical distribution of marine molluscs within the State is poorly known and there is little quantitative information on the relative abundance of species. Moreover, it is not always clear from older, more taxonomically orientated work whether the recording of a species from a locality represents the finding of a live specimen of merely an empty shell This paper describes the information on mollusc abundance and distribution gained from a quantitative survey of the benthos of Crib Point, Western Port, carried out in 1965 by the Fisheries and Wildlife Division of the Ministry for Conservation, Victoria.

SURVEY AREA

Western Port (Fig. 1) is a land-locked tidal bay approximately 70 km south-east of Melbourne and is separated form Port Phillip, some 20 km to the west, by the Mornington Peninsula. In the centre of Western Port is French Island, and the junction of Western Port and Bass Strait is largely occupied by Phillip Island. Two deep-water channels, North Arm and East Arm, partially encircle French Island before giving way to extensive areas of intertidal flats in the north of the bay. Crib Point is situated about half way along the western shore of North Arm At Crib Point is an oil refinery (BP), and a jetty, used for docking tankers, projects into the channel. In the deeper portions of North Arm (>3 fathoms, approximately) adjacent to Crib Point the substratum is of medium to coarse sand with stones and shell gravel and very little mud while the sediment at the channel edges is of fine sand with a higher mud content, up to 60% (Marsden and Mallet 1975) and probably more in some places. Muddy sediment is also found on the two spits, partially exposed at low tide, which lie in North Arm between Crib Point and French Island Between June 1964 and March 1965 parts of North

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Arm between Stony Point and Crib Point and parts of the turning basin at Crib Point jetty were dredged. Spoil from this dredging was dumped a little to the south-east of the southern tip of Middle Spit.

SURVEY DESIGN, METHODS AND TREATMENT OF SAMPLES

Fifty stations arranged as a pattern of concentric semicircles centred on Crib Point and spread over an area of approximately 9 km^2 (Fig. 1) were sampled with a 0.1 m^2 Smith-McIntyre benthic grab. Sampling was carried out from the Division's research vessels *Caprella* and *Melita* and five grab samples were taken at each station, except for station 33S at which only one sample was taken. The samples were preserved with 5% formalin neutralised with hexamine and returned to the laboratory where they were passed through a series of sieves, the smallest mesh size of which was 1 mm^2. The material retained in the sieves was sorted and the animals removed for identification. Only those molluscs alive at the time of collection were considered when diversity and abundance was calculated and when species distribution was plotted.

Species were grouped into feeding types on the basis of information appearing in the literature (Morton 1958; Macpherson and Gabriel 1962; Poore and Rainer 1974). Species diversity was calculated using the Shannon-Weaver diversity function $H = -\sum_{i=1}^{S} p_i \ln p_i$, where P_i is the proportion of individuals represented by *i*th of *s* species.

RESULTS

A total of 3,844 individuals comprising 121 species was examined. Of these, 4.5% of individuals and 13.6% of species were chitons, 33.7% of individuals and 52.2% of species were gastropods, and 61.8% of individuals and 32.2% of species were bivalves. The average number of individuals per station was 77 and of species was 10, but actual numbers varied considerably (Table 1). With a total of 488 individuals and 29 species station 03S was richest in terms of both, whilst, except for 23S and 32E where no molluscs were found, station 35N was the poorest with only three individuals of one species. Diversity H^1, ranged from 0 at station 35N to 2.9 at station 23N (Table 1) the average value being 1.5. There was a significant negative correlation between number of individuals per station and depth ($r = -0.4$, significant at the 1% level) and between number of species per station and depth ($r = -0.37$, just significant at the 1% level) but there was not such a good correlation between species diversity, H^1, and depth ($r = -0.29$, significant at the 5% level).

Suspension feeding individuals were distributed throughout the survey area and there was no correlation between numbers of individuals per station and depth although there was some aggregation around Crib Point jetty (Fig. 2). Most suspension-feeders were infaunal bivalves but the epifaunal suspension-feeding limpet *Sigapatella calyptraeformis* was widespread wherever there was suitable substratum for attachment (Fig. 7). Predators, like suspension-feeders, were also found throughout the survey area (Fig. 3) and all were gastropods.

In contrast, grazers (Fig. 4), surface deposit feeders (Fig. 5) and scavengers (Fig. 6) were mostly found in the shallower water at the channel edge or adjacent to Middle Spit. With increasing depth the grazing molluscs collected changed from predominantly gastropods to predominantly chitons.

Considerable differences were found in the relative abundance of the species collected. Twelve of the one hundred and twenty one species collected each accounted for 2.4% or more of the total number of molluscs examined and together provided more than 60% of the individuals collected (Table 2). The distribution of these twelve most abundant species around Crib Point is shown in Figures 7-10. Five of these species, *Subterenochiton gabrieli, Sigapatella calyptraeformis, Nassarius nigellus, Neotrigonia margaritacea* and *Notocallista diemensis* may be regarded as relatively widespread within the survey area since they occurred at a third or more of the stations sampled (Table 2). The other seven of the most numerous species were more restricted in their occurrence, owing what degree of numerical dominance they showed to their abundance at a few stations only.

The gastropods *Cantharidella tiberiana, Micrastrea aurea* and *Macrozafra atkinsoni*, and the bivalves *Pronucula concentrica, Notolepton* sp. *Mysella donaciformis* and *Katelysia rhytiphora* were found mainly at the shallow-water stations whilst the chiton *Subterenochiton gabrieli*, the gastropod

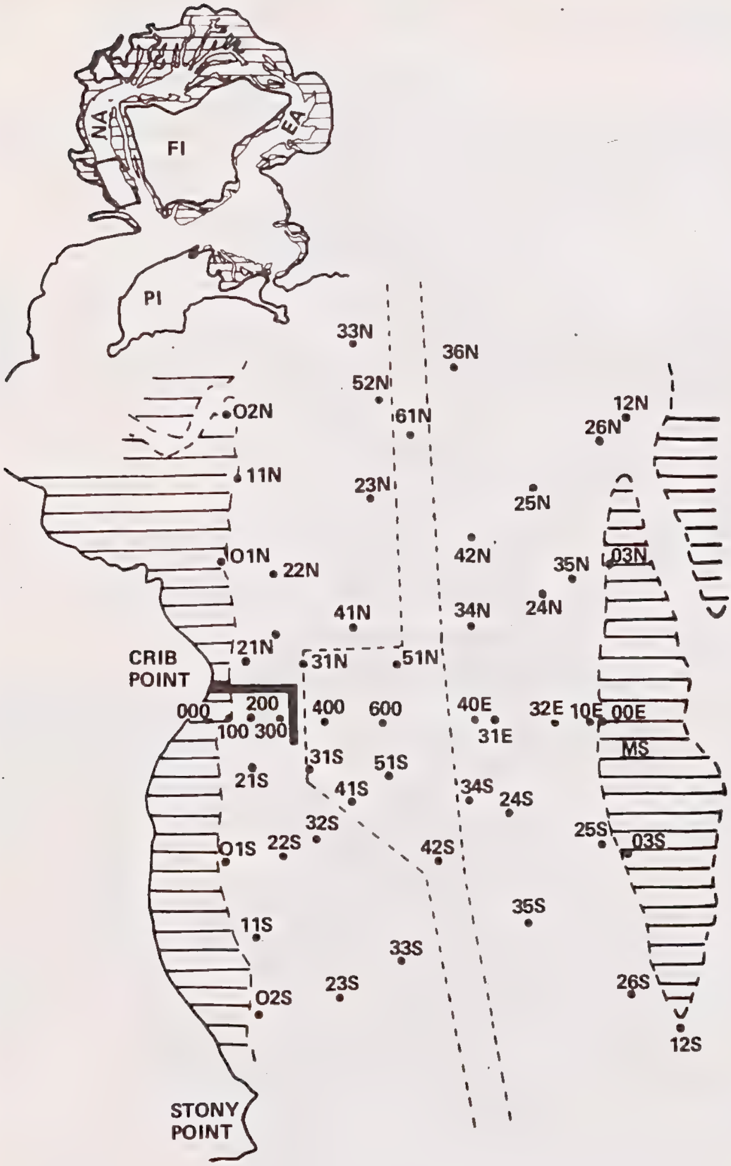

FIGURE 1.
Top left shows a map of Western Port; hatching indicates intertidal areas with substratum of fine sand and mud, unhatched areas are subtidal with substratum of medium to coarse sand. NA = North Arm, EA = East Arm, FI = French Island, PI = Phillip Island. Rectangle in North Arm indicates survey area which is enlarged below, where distribution of stations around Crib Point is shown. Approximate limits of dredged areas around Crib Point are shown by the broken lines MS = Middle Spit

Sigapatella calyptraeformis and the bivalves *Neotrigonia margaritacea* and *Notocallista diemensis* were more characteristic of the deeper areas of North Arm sampled.

DISCUSSION

The influence of sediment characteristics on the distribution of molluscs has been studied by a number of workers (including Sanders 1958; Holme 1966; Rhoads and Young 1970; Driscoll and Brandon 1973; and Poore and Rainer 1974), and around Crib Point, as elsewhere, sediment type can be seen to play an important role in determining mollusc distribution. Two of the six most abundant bivalve species, *Neotrigonia margaritacea* and *Notocallista diemenensis*, were characteristic of the stations within the deeper portions of North Arm where the sediment is mainly medium to coarse sand. That it is sediment type rather than depth which is controlling distribution, at least in the case of *Neotrigonia*, is shown by the fact that in the shallower northern areas of the bay beds of *Neotrigonia* are commonly found in the patches of sand which occur amongst the more usual muddy-sediment. The other four of the most numerous bivalves, *Pronuncula concentrica, Notolepton* sp., *Mysella donaciformis* and *Katelysia rhytiphora*, were found mainly in the shallow water along the edge of the channel and adjacent to Middle Spit where the substratum is of fine sand and mud. Most of the remaining species taken in the survey occurred in too small numbers or at too few stations to allow any inference concerning their substratum preference. However, amongst the most common of these remaining species the surface deposit feeder *Tellina (Macomona) mariae* was confined to the shallower stations and the suspension feeders *Venericardia bimaculata* and *Solen vaginoïdes* to the deeper parts of the survey area.

The precise means whereby sediment type affects molluscs distribution is not clear. To some extent the relationship between molluscs and sediment is a direct one, the properties of a particular sediment governing those species which can live there, but there is also an indirect relationship, sediment type being a reflection of other environmental characteristics (e.g. current velocity and flow patterns) which themselves affect species distribution.

The muddy areas where surface deposit feeders, grazing molluscs and scavengers were most abundant are also those areas where algae and algal detritus are most plentiful and there is, therefore, a close and direct link between these feeding-types and the sediment from which they obtain their food. Suspension feeders are less obviously dependent on the substratum for their food supply and might therefore be expected to be abundant throughout the survey area, but the distribution of the two most widespread suspension feeders *(Neotrigonia* and *Notocallista)* shows that they are largely absent from areas of fine sediment. Predatory species, whose relationship to the substratum is probably less direct than that of any other feeding type, were found throughout the survey area.

The relative paucity of suspension feeders in areas of fine sediment has been noted by a number of workers and two main hupotheses have been proposed to account for this. Rhoads and Young (1970) suggest that the resuspension by surface deposit feeding organisms of sediment from muddy substrata probably exceeds the silting tolerance of most suspension feeding benthos and also subsequently leads to the burial of larval and juvenile forms. Sanders (1958) suggests that since areas of fine sediments are those in which current flow is weak they are also areas in which the potential food supply for filter feeders is limited. These two factors cannot, however, completely explain the differences in substratum preferences of surface deposit and suspension feeders and it is to be noted that in the Crib Point survey the suspension feeding bivalves *Mysella donaciformis* and *Katelysia rhytiphora* were predominantly found in areas of fine sediment.

The decrease in the number of molluscs found at the deeper stations can be partly explained by a reduction in the number of grazing molluscs collected there, but may also reflect human activity in the area. Between June 1964 and March 1965 the area from Stony Point to Crib Point was dredged and the effects of this may partly explain the relative paucity of animals found in the deeper parts of the channel. Waste from this dredging was dumped at the Tankerton spoil ground which is close to station 12S and may explain the poor fauna at that staiton (Watson 1974)

The comprehensiveness of the 1965 survey in providing a picture of the mollusc fauna of Crib Point as it existed at that date is limited by the sampling programme and techniques used. Relatively few intertidal stations were sampled and the Smith-McIntyre grab is designed for use on soft substrata: consequently littoral molluscs and those epifaunal molluscs which inhabit hard surfaces are likely to be under represented in the samples. Nevertheless, the mollusc population found around Crib Point was a rich and diverse one and the number of species found (121) and the average species diversity (H = 1.5) compare favourably with the results of a survey of the molluscs of the whole of Port Phillip which yielded 105 species and an average diversity, H, of 0.75 (Poore and Rainer 1974; G. Poore pers. comm.). More recent benthic work in Western Port has been concerned with a faunal survey of the entire bay, but a re-investigation of Crib Point would be of considerable interest in showing whether or not ten years of increasing urbanisation and industrial activity in the area have led to any significant changes in the mollusc population of that region.

ACKNOWLEDGEMENTS

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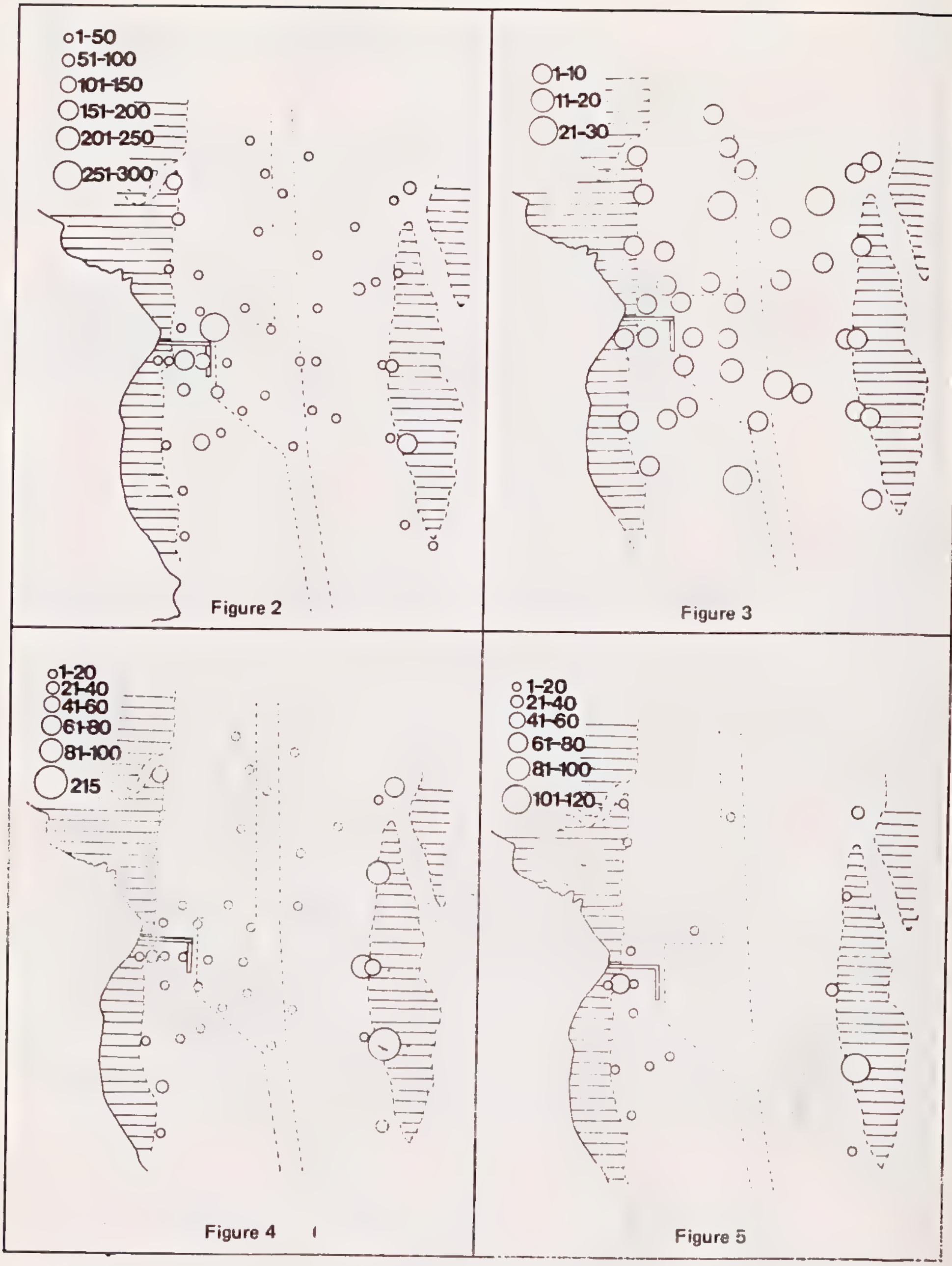

FIGURES 2-5.
2. Distribution of suspension-feeding molluscs around Crib Point.
3. Same for predatory molluscs.
4. Same for grazing molluscs.
5. Same for surface-deposit feeding molluscs.

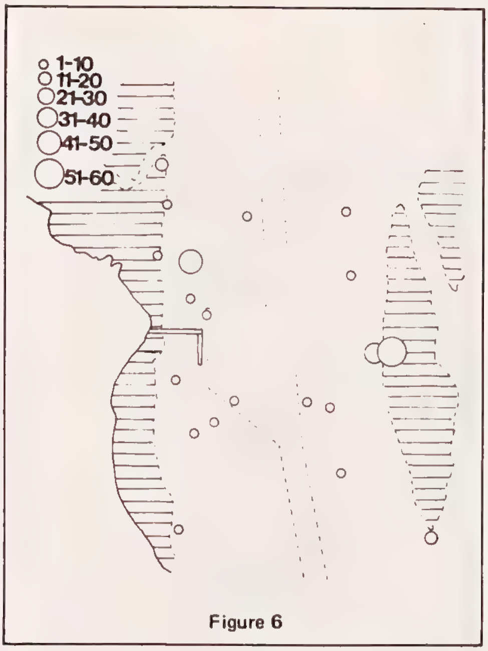

FIGURE 6.
Distribution of scavenging molluscs around Crib Point.

APPENDIX: Annotated list of Molluscs found

Most identifications are the author's but acknowledgement is due to Mr. R. Burn, Honorary Associate in Malacology, National Museum of Victoria, for his identifications of the chitons and opisthobranchs collected, and to Dr. Winston Ponder of the Australian Museum, Sydney, for his identification of a number of the smaller bivalve and gastropod species collected. Thanks are also due to Dr. B. Smith and the staff of the National Museum of Victoria for help and facilities made available.

Species names are, with some exceptions, which are indicated, those appearing in Macpherson and Gabriel (1962). Each species is followed by a figure indicating the number of individuals found in the survey: more exact information on the distribution of the species at the stations sampled may be obtained from the author. Species marked by an asterisk are not recorded from Western Port in Macpherson and Gabriel (1962).

Class AMPHINEURA

Lepidopleuridae

**Lepidopleurus badius* (Hedley & Hull, 1909) 2
**L. liratus* (H. Adams & Angas, 1864) 3
**L. mathewsianus* (Bednall, 1906) 2 These three species listed as *Terenochiton* in Macpherson and Gabriel (1962: 2-3)
**Parachiton profundis* (May, 1923) 20

Lepidochitonidae

Subterenochiton gabrieli (Hull, 1912) 94
**Acutoplax mayi* (Torr, 1912) 2
**Paricoplax crocinus* (Reeve, 1847) 3

Crypotoplacidae

**Craspedoplax cornuta* Torr & Ashby, 1898 4

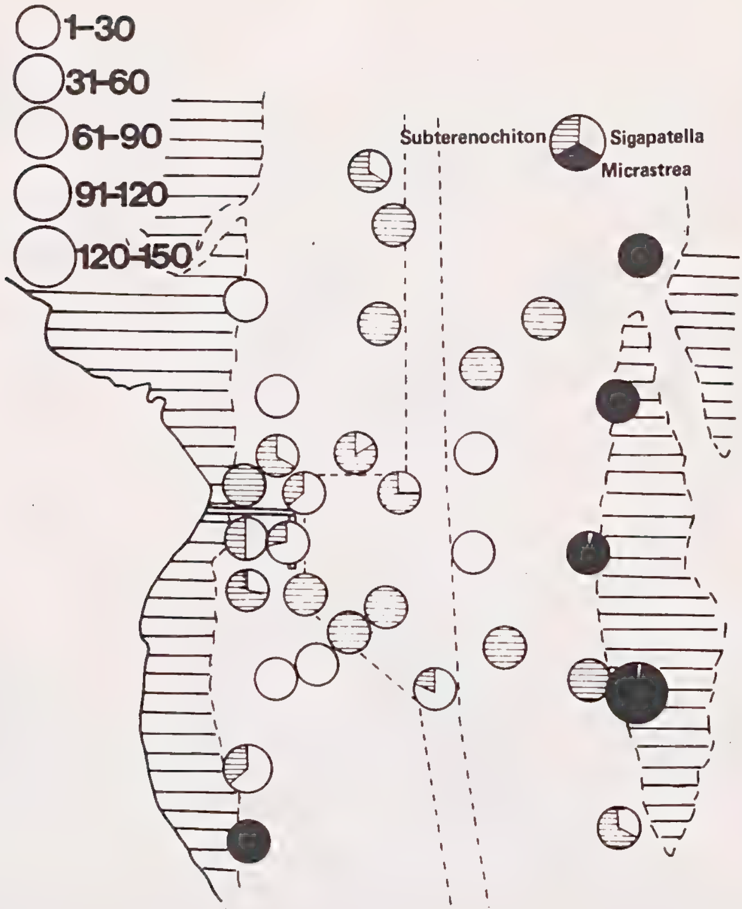

FIGURE 7.
Distribution of the chiton *Subterenochiton gabrieli* and the gastropods *Sigapatella calyptraeformis* and *Micrastrea aurea* at the stations sampled in the 1965 Crib Point Survey. Circle size indicates total number of individuals of these species per station; the relative proportion of hatched, clear and dark segments indicates relative abundance of *Subterenochiton*, *Sigapatella* and *Micrastrea* respectively.

Acanthochitonidae

**Acanthochitona lachrymosus* (Torr, 1912) 1

A. wilsoni (Sykes, 1896) 2 These species are listed in Macpherson & Gabriel (1962: 10-11) as members of the family Cryptoplacidae

Ischochitonidae

**I. falcatus* (Hull, 1912) 3

I. tateanus Bednall, 1897 5

**I. wilsoni* (Sykes, 1896) 2

I. variegatus (A. Adams & Angas, 1864) 1

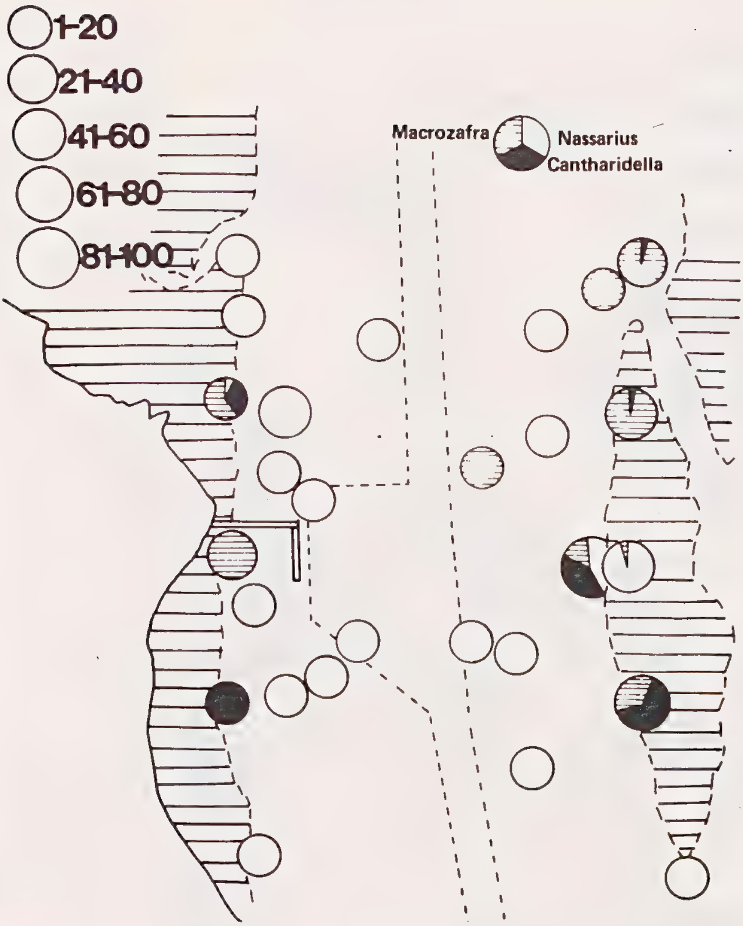

FIGURE 8.
Distribution of the gastropods *Macrozafra atkinsoni, Nassarius nigellus* and *Cantharidella tiberiana* at the 1965 Crib Point Survey. See also caption to Fig. 7.

Chitonidae
**Rhyssoplax tricostalis* (Pilsbry, 1894) 1

Class GASTROPODA
Fissurellidae
Fissurellid sp. 30 Possibly juvenile *Amblychilepas nigrita* (Sowerby, 1834)
Notomella dilecta (A. Adams, 1851) 1
Hemitoma subemarginata (Blainville, 1819) 1

Acmaeidae
Actinoleuca calamus (Crosse & Fischer, 1864) 1

Trochidae
Cantharidella tiberiana (Crosse & Fischer, 1863) 104

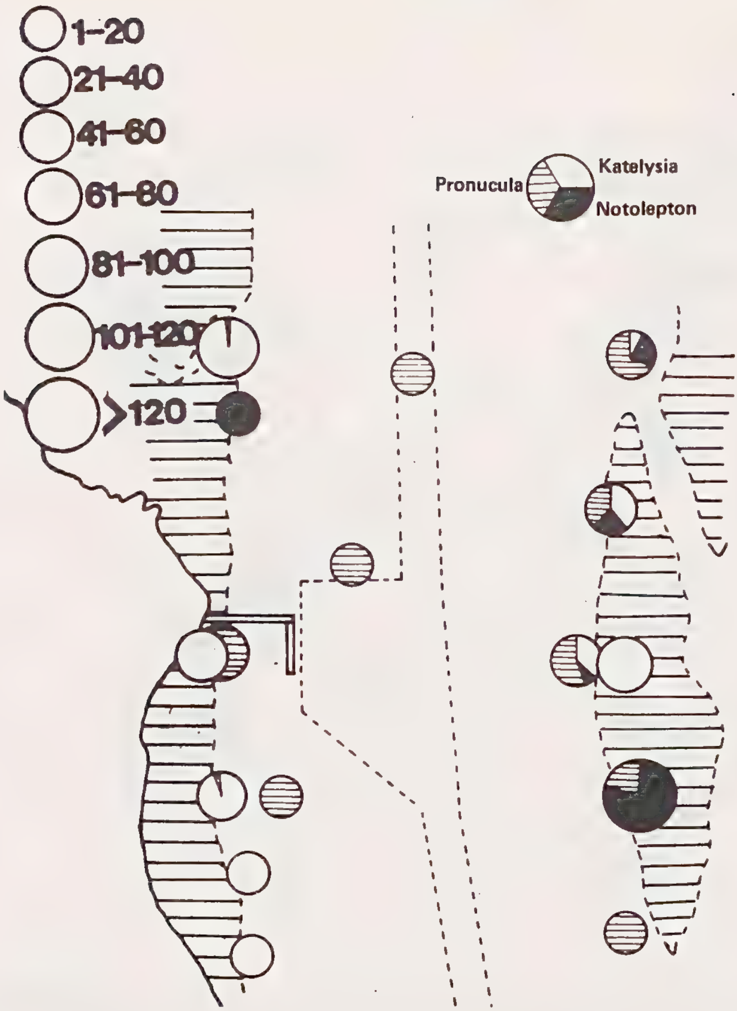

FIGURE 9.
Distribution of the bivalves *Pronucula* spp., *Katelysia rhytiphora* and *Notolepton* sp. at the stations sampled in the 1965 Crib Point Survey. See also caption to Fig. 7.

Austrocochlea constricta (Lamarck, 1822) 4
Clanculus plebejus (Phillippi, 1851) 5
Ethminolia tasmanica (Tenison Woods, 1876) 3

Skeneidae
Cirsonella weldii (Tenison Woods, 1877) 8 Placed in the Trochidae by Macpherson and Gabriel (1962: 76)

Turbinidae
Argalista rosea (Tenison Woods, 1876) 5
Micrastrea aurea (Jonas, 1844) 170

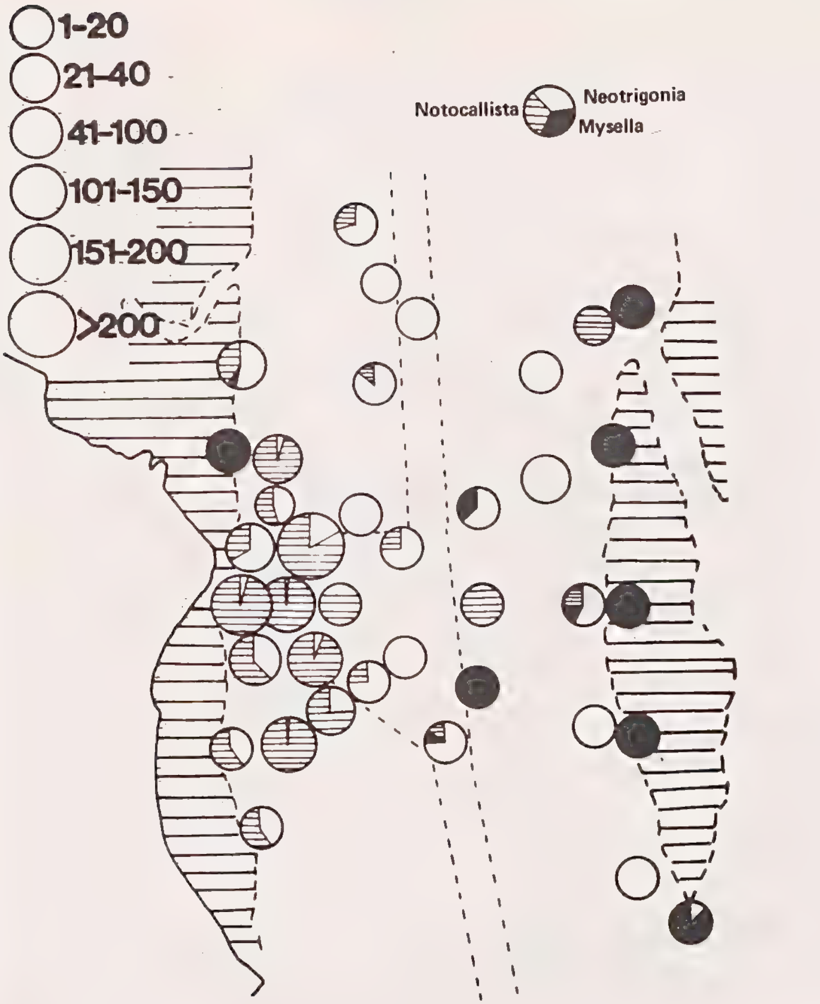

FIGURE 10.
Distribution of the bivalves *Notocallista diemenensis*, *Neotrigonia margaritacea* and *Mysella donaciformis* at the stations sampled in the 1965 Crib Point Survey. See also caption of Fig. 7.

Phasianellidae

Phasianella sp. (juvenile) 3 Macpherson and Gabriel (1962: 82) place *Phasianella* in the family Turbinidae

Rissoellidae

Rissoella sp. 20

Turritellidae

Gazamedea tasmanica (Reeve, 1849) 2 Listed in Macpherson and Gabriel (1962: 98) as *G. subsquamosa*, use of specific name *tasmanica* follows Garrard (1972).

Siliquariidae
Pyxipoma weldii (Tenison Woods, 1875) 9

Potamididae
Zeacumantus diemenensis (Quoy and Gaimard, 1832) 2

Cerithidae
Diala varia A. Adams, 1861 53

Eulimidae
Eulimid sp. 1 Possibly *Melanella petterdi* (Beddome, 1882)

Hipponicidae
Hipponyx conicus (Schumacher, 1817) 47

Calyptraeidae
Sigapatella calyptraeformis (Lamarck, 1822) 108
Zeacrypta immersa (Angas, 1865) 5

Naticidae
Sigaretotrema umbilicata (Quoy & Gaimard, 1833) 4
Ectosinum zonale (Quoy & Gaimard, 1833) 4
Friginatica beddomei (Johnston, 1874) 3
Naricarius subcostata (Tenison Woods, 1878) 7
Proxiuber shorehami (Pritchard & Gatliff, 1900) 2

Lamellariidae
Lamellaria ophione Gray, 1849. 2

Cymatiidae
Cymatiella lesueuri Iredale, 1929. 1
Negyrina subdistorta (Lamarck, 1822) 2

Muricidae
Bedeva paivae (Crosse, 1864) 1
Typhis sp. 1 juvenile

Collumbellidae
Dentimitrella pulla (Gaskoin, 1851) 74
Pseudomycla miltostoma (Tenison Woods, 1876) 2
Macrozafra atkinsoni (Tenison Woods, 1875) 142

Buccinidae
Cominella eburnea (Reeve, 1846) 2
C. lineolata (Lamarck, 1809) 2
Tasmeuthria clarkei (Tenison Woods, 1875) 2

Nassariidae
The Indo-pacific Nassaridae have recently been revised (Cernohorsky 1972) and the names of a number of the species listed in Macpherson and Gabriel (1962) have changed.
Nassarius (Niotha) nigellus (Reeve, 1854) (= *Tavaniotha optata*, Macpherson and Gabriel 1962: 195) 227
Nassarius (Zeuxis) pyrrhus (Menke, 1843) (= *Niotha pyrrhus*, Macpherson and Gabriel 1962: 196) 2

Fasciolariidae
Microcolus dunkeri (Jonas, 1844) 1

Olividae
Zemira australis (Sowerby, 1841) 3
Alocospira marginata (Lamarck, 1810) 1
A. oblonga (Sowerby, 1830) 2

Mitridae
Cancilla strangei (Angas, 1867) 1

Volutidae
Amoria undulata (Lamarck, 1804) 2 *Amorena* in Macpherson and Gabriel (1962: 22)

Cancellariidae
Cancellaria (Sydaphera) undulata (Sowerby, 1848) 2

Marinellidae
Closia petterdi (Beddome, 1883) 6
Euliginella connectans (May, 1910) 10
Devigirella victoriae (Gatliff and Gabriel, 1908) 6
Austroginella johnstoni (Petterd, 1884) 87

Turridae
Turrid sp. 1
Epidirona quoyi (Reeve, 1843) 2

Conidae
Floraconus (juvenile) 10

Pyramidellidae
Syrnola sp. 1
Syrnola bifasciata (Tenison Woods, 1875) 7
Cingulina spina (Crosse and Fischer, 1864) 1

Atysidae
Liloa brevis (Quoy & Gaimard, 1833) (= *Haminoea brevis,* Macpherson and Gabriel 1962: 242) 29
Haminoea maugeansis Burn, 1966 (= *H. tenera,* Macpherson and Gabriel 1962: 243) 54

Scaphandridae
Cylichna arachis (Quoy & Gaimard, 1833) 12

Philinidae
Philine columnaria Hedley & May, 1908 30

Aglajiidae
Aglaja cf. taronga Allan, 1933 1 *A. taronga* is not recorded from Western Port

Pleurobranchidae
Berthellinops serenitas Burn, 1961 2

Dorididae
Trippa albata Burn 1961 2
Doris cameroni (Allan 1942) 1
Chromodoris alternata (Burn 1957) 1

Dendrodorididae
Doriopsilla carneola (Angas, 1864) 1

Class BIVALVIA

Nuculidae
**Pronucula concentrica* Cotton, 1930 159
P hedleyi (Pritchard & Gatliff, 1904) 48

Arcidae
Barbatia pistachia (Lamarck, 1819) 11
B. squamosa (Lamarck, 1819) 4

Limopsidae
Lissarca rubricata (Tate, 1886) 12

Philobryidae
**Micromytilus francisensis* Cotton, 1931 36 A new record for Victoria

Mytilidae
Dacrydium radians Suter, 1908 6
Gregariella barbatus (Reeve, 1858) 4

Pectinidae
Cyclopecten favus Hedley, 1902 65

Limidae
Limatula strangei (Sowerby, 1872) 2

Trigoniidae
Neotrigonia margaritacea (Lamarck, 1804) 234

Crassatellidae
Eucrassatella kingicola (Lamarck, 1804) 3

Carditidae
Venericardia bimaculata (Deshayes, 1852) 67

Condylocardiidae
Radiocondyla subradiata Tate & May, 1900 1

Cyamiidae
Cyamium (Cyamiomactra) mactroides Tate & May, 1900 25 *Cyamiomactra* in Macpherson and Gabriel (1962: 321). Ponder (1971) advocates use of the generic name *Cyamium*

Ungulinidae
Diplodonta globulosa A. Adams, 1855 5

Lucinidae
Myrtea botanica (Hedley, 1917) 2
Bellucina crassilirata (Tate, 1886) 71
Wallucina assimilis (Angas, 1867) 2

Erycinidae
Lepton frenchiensis Gatliff & Gabriel, 1916 1
**L. ovatum* Tate, 1886 3

L. trigonale Tate, 1879 (= *Bornia trigonale*, Macpherson and Gabriel 1962: 332) 8
Notolepton sp. 138 Previously recorded, Macpherson and Gabriel (1962: 334), from Port Phillip Heads as *Notolepton antipodum* (Filhol, 1880) a New Zealand species.

Montacutidae
Mysella donaciformis Angas, 1878 97
M. cf. lactea (Hedley, 1902) 2

Cardiidae
Fulvia tenuicostata (Lamarck, 1819) 19
Nemocardium thetidis (Hedley, 1902) 4 *Pratulum thetidis* in Macpherson and Gabriel (1962: 339).

Veneridae
Dosinia victoriae Gatliff & Gabriel, 1914 2 *Kereia victoriae* in Macpherson and Gabriel (1962: 342).
Notocallista diemenensis (Hanley, 1844) 895
Katelysia rhytiphora (Lamy, 1937) 281

Mesodesmatidae
**Mesodesma nitida* Deshayes, 1854 *Donacilla nitida* in Macpherson and Gabriel (1962: 362); use of genus *Mesodesma* follows de Rooij - Schuiling (1972)

Tellinidae
Tellina (Macomona) mariae Tenison Woods 1876 39 *Homalina* in Macpherson and Gabriel (1962: 377); use of *Tellina* follows Ponder (1975).

Solenidae
Solen vaginoides (Lamarck, 1818) 87

Hiatellidae
Hiatella australis (Lamarck, 1818) 8

Cleidothaeridae
Cleidothaerus albidus (Lamarck, 1819) 1

Thraciidae
Thracia speciosa Angas, 1869 4 *Eximiothracia speciosa* in Macpherson and Gabriel (1962: 397).
T. modesta Angas, 1867, 5 *Eximiothracia modesta* in Macpherson and Gabriel (1962: 397).
**T. lincolnensis* Verco, 1907 1 *Eximiothracia lincolnensis* in Macpherson and Gabriel (1962: 399).

Laternulidae
Laternula creccina Reeve, 1860 2 *L. creccina* and *L. tasmanica* Macpherson and Gabriel (1962: 400) are both the same species (W. F. Ponder pers. comm.).

TABLE 1 Numbers of species and individuals and species diversity, H^1, of molluscs collected at the 1965 Crib Point survey stations.

Station	No. of species	No. of individuals	H^1
000	4	51	0.36
00E	18	209	1.92
01N	11	53	2.05
01S	12	63	2.05
02N	14	172	1.62
02S	6	15	1.45
03N	19	147	2.05
03S	29	488	2.30
100	10	118	1.66
10E	21	206	2.55
11N	14	93	2.03
11S	16	72	2.04
12N	16	179	2.29
12S	7	42	1.38
200	11	191	0.83
21N	13	64	2.07
21S	10	82	1.65
22N	12	93	1.42
22S	7	158	0.60
23N	29	70	2.88
23S	0	0	0
24N	8	74	1.21
24S	3	10	0.80
25N	7	22	1.46
25S	9	45	1.69
26N	5	6	1.65
26S	19	59	2.28
300	12	155	1.23
31N	12	272	0.92
31E	5	8	1.15
31S	9	161	0.44
32N	11	40	2.15
32E	0	0	0
32S	16	57	2.14
33N	11	30	1.77
33S	4	4	1.28
34N	16	11	1.67
34S	4	27	0.66
35N	1	3	0
35S	2	32	0.23
36N	2	5	0.50
400	4	19	0.85
40E	2	14	0.26
41N	22	47	2.60
41S	8	12	1.98
42N	3	5	0.95
42S	11	31	1.86
51N	21	47	2.65
51S	18	29	2.69
52N	7	23	1.46
600	3	8	0.96
61N	4	22	1.28

TABLE 2 Number of individuals collected and relative abundance of each of the twelve numerically dominant mollusc species collected in the 1965 survey of Crib Point benthos.

Species	Total No. collected	Number collected as % of All molluscs	Chitons	Gastropods	Bivalves	% of stations at which found
AMPHINEURA						
Subterenochiton gabrieli	94	2.5	61.4	–	–	38
GASTROPODA						
Cantharidella tiberiana	104	2.7	–	7.8	–	10
Micrastrea aurea	170	4.5	–	12.7		10
Sigapatella calyptraeformis	108	2.8	–	8.1	–	40
Macrozafra atkinsoni	142	3.7	–	10.6	–	18
Nassarius nigellus	227	5.9	–	17.0	–	40
BIVALVIA						
Pronucula concentrica	159	4.1	–	–	6.8	20
Neotrigonia margaritacea	234	6.1	–	–	9.9	56
Notolepton sp.	138	3.6	–	–	5.9	10
Mysella donaciformis	97	2.5	–	–	4.1	24
Notocallista diemenensis	895	23.4	–	–	38.0	46
Katelysia rhytiphora	281	7.4	–	–	11.9	20